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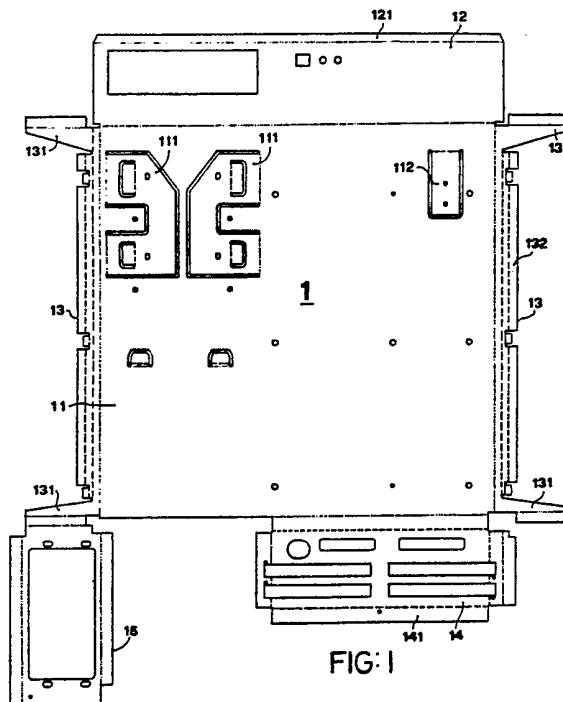
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(56) Documents cited
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(58) Field of search
UK CL (Edition K) B8P PE2A, H1R RBH RBL RBM
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(54) Computer housing

(57) A computer housing is formed from a metal blank by bending up a front panel (12), side portions (13) and back panels (14, 15) from a base (11). Members (111) are bent up from the base to support a disc drive, and member (112) is bent up to support a guide rail. Trapezoidal reinforcing strips (131) are provided at the ends of the side portions (13) to secure the sides to the front and back panels.



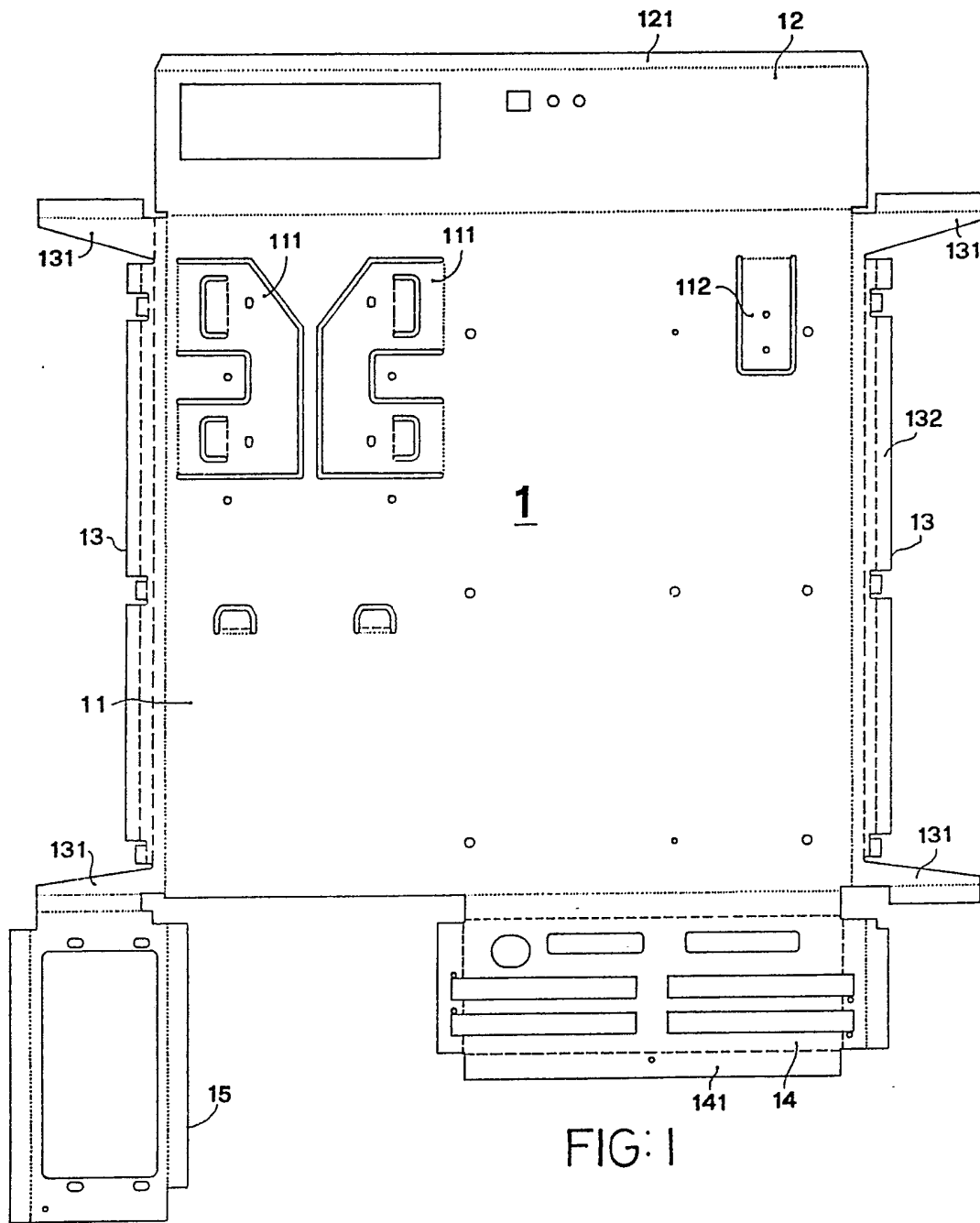


FIG: 1

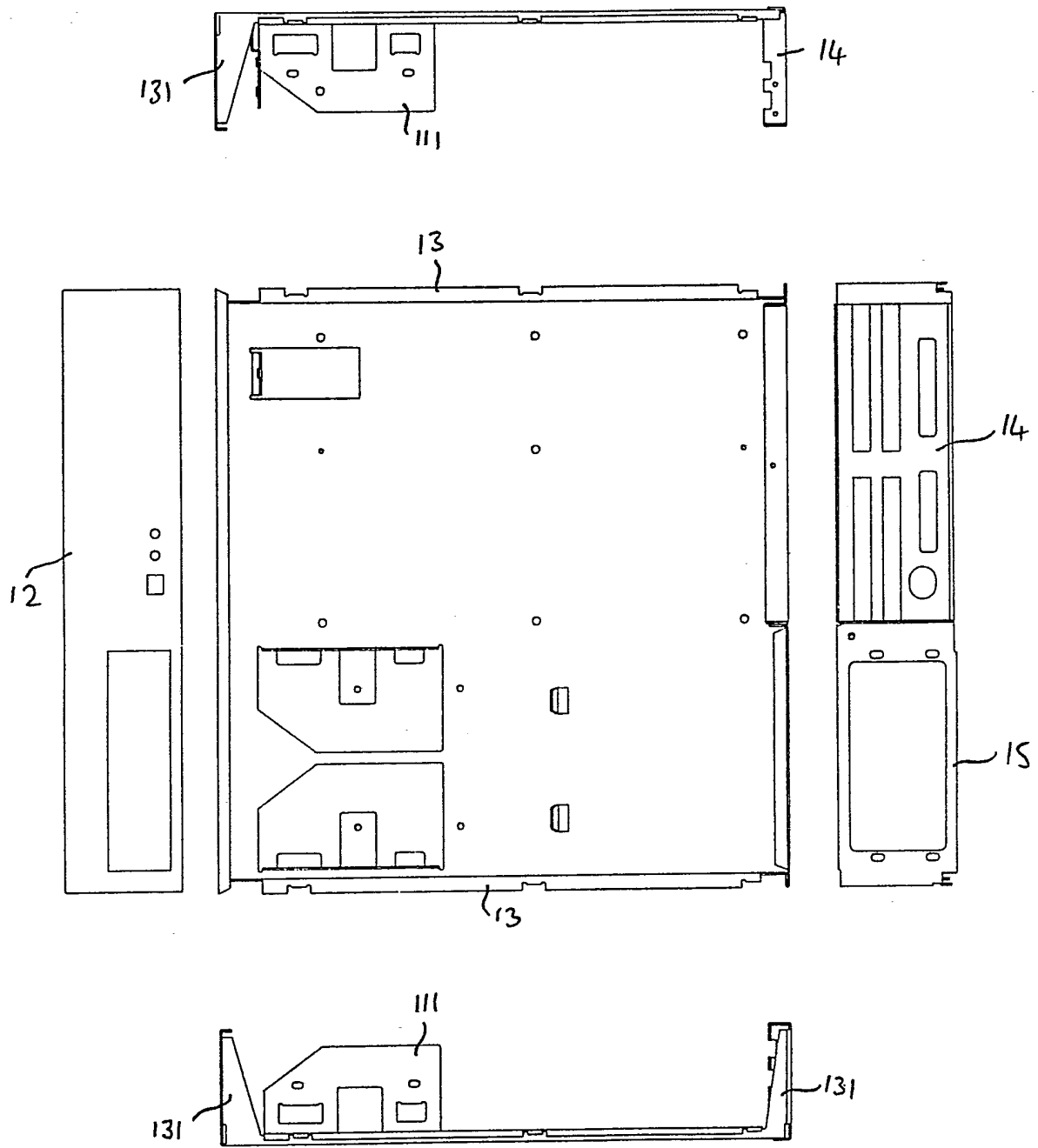


FIG:2

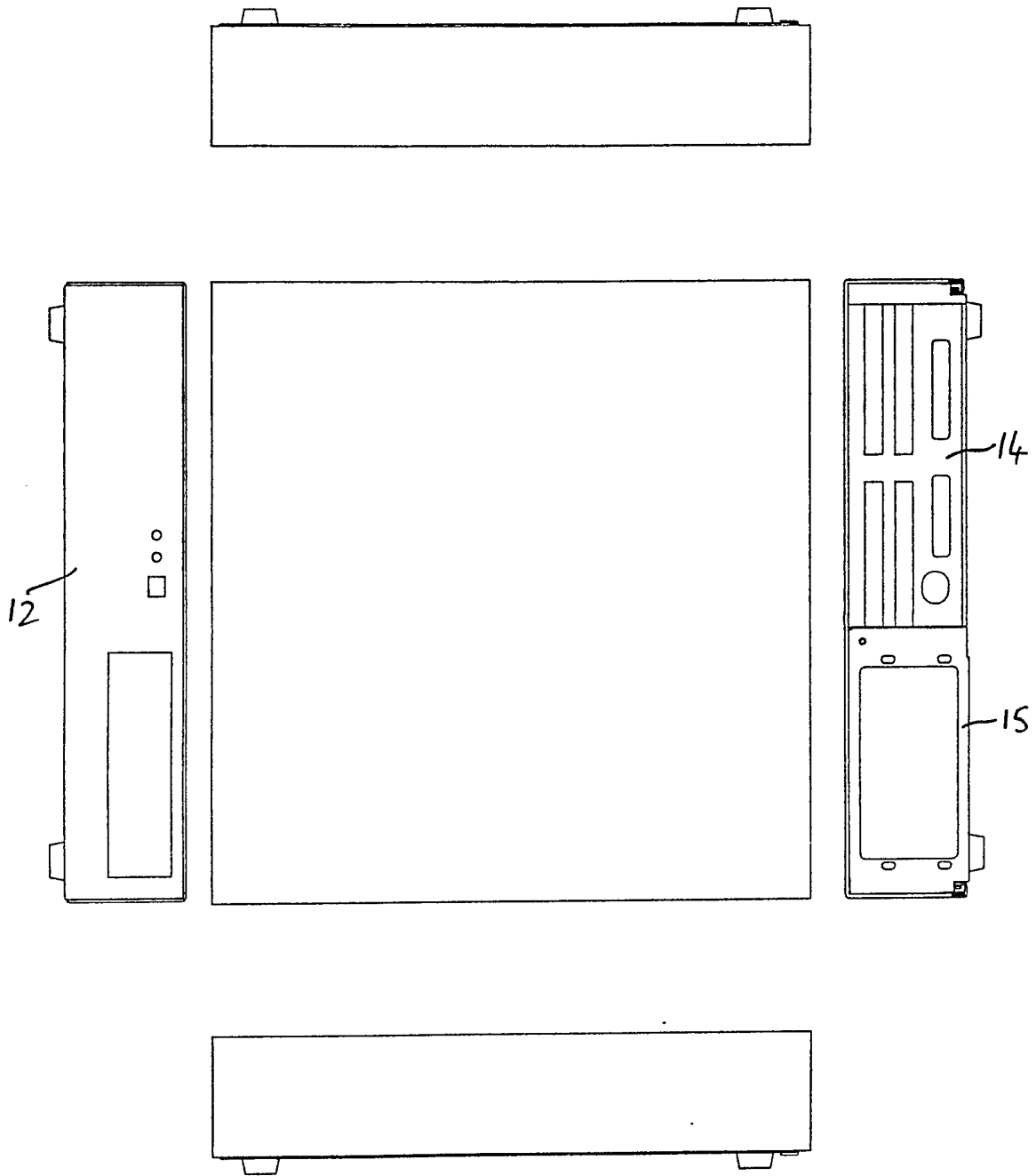


FIG:3

COMPUTER HOUSINGBACKGROUND AND SUMMARY OF THE INVENTION:

The present invention is related to computer housings and more particularly to a housing for computer work station which is integrally shape formed of a single piece of metal plate through folding process.

Regular computer housing is generally formed of several parts respectively connected together through welding process or by rivet or screw means. Because of many contacts and parts, a computer housing is very difficult to precisely set up. Further, the stability and performance of a computer may be affected by any possible vibration due to many contacts on the housing.

The present invention is to provide a housing for computer work station which can efficiently eliminate the afore-said problems and achieve various advantages including:

(1) Simplified shape forming process with less contact points provided: Since one single metal plate is required for shape forming through folding process, less contact points are provided;

(2) Deformation protective: Since no any rivet, nail, screw means are used neither welding process is required, precision shape of size can be integrally made to

prevent from deformation due to poor connection between parts; and

(3) Inexpensive to manufacture: Since the housing is formed of a single piece of metal plate through folding process, less material and less labor are required so that manufacturing cost can be effectively reduced.

BRIEF DESCRIPTION OF THE DRAWINGS:

The present invention will now be described by way of example with reference to the annexed drawings, in which:

Fig. 1 is a schematic plain view drawing of the present invention (before folding into shape);

Fig. 2 is a schematic plain view of the present invention illustrating the six sides thereof after it is folded into shape; and

Fig. 3 is a schematic plain view of the present invention illustrating the six sides thereof after the upper cover is attached.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT:

Referring to the annexed drawings in greater detail, there is a single piece of metal plate 1 comprised of a square board 11 having a plurality of side extensions respectively extending therefrom at the four sides thereof.

As illustrated, the square board 11 comprises therein two unitary, polygonal, symmetrical frame members

111 at one side, which can be folded up (along dotted line) to vertically project from the square board 11 for mounting disk drive, and an unitary, U-shaped guide rail holder frame 112 at an opposite side, which can be folded up to vertically project from the square board 11 to form a guide rail holder. An unitary, rectangular front panel portion 12 extends from the square board 11 at one side, which has a rectangular slot thereon corresponding to the two frame members 111. After the rectangular front panel portion 12 is folded up to a vertical position relative to the square board 11, the rectangular slot thereon forms an opening for disk drive. The front panel portion 12 has an unitary, parallel end strip 121 having two bevel edges at two opposite ends and being vertically folded up for locking up with an upper cover.

There are two unitary side board portions 13 bilaterally extending from the square board 11 at two opposite sides, each of which comprises two unitary trapezoidal reinforcing strips 131 at two opposite ends with an unitary elongated side strip 132 defined therebetween. After the two side board portions 13 are vertically inwardly folded up from the square board 11, the two side strips 132 are vertically outwardly folded up from the two side board portions 13 (along the long dotted line) permitting the four reinforcing strips 131 to respectively cover the four angles of the housing formed.

There is a rectangular slot card mounting board portion 14 extending from the square board 11 at one side opposite to the front panel portion 12 and having an unitary side strip 141. After the back panel portion 14 is vertically inwardly folded up from the square board 11, the side strip 141 thereof is vertically outwardly folded up therefrom for locking up with an upper cover.

There is a slotted back panel portion 15 extending from one of the reinforcing strips 131, which is inwardly folded up to form the back panel of the housing for mounting electric power supply device.

Referring to Fig. 2, a housing which has four vertical side walls is set up, after the metal plate 1 is properly folded up along the folding lines, with disk drive hole, disk drive mounting frame, guide rail holder frame, slot card mounting board and power supply device mounting board respectively formed therein. After internal component parts and electric wiring are set inside the housing, an upper cover is attached to form a computer work station.

CLAIMS

1. A housing for computer work station, being integrally shape formed of a single piece of metal plate through folding process, said metal plate comprising:

a substantially square board defining therein two unitary, polygonal, symmetrical frame members at one side and vertically folded up therefrom for mounting disk drive, and an unitary, U-shaped guide rail holder frame at an opposite side and vertically folded up therefrom for holding a guide rail;

an unitary, front panel portion extending from said square board at one side and having a rectangular opening thereon, said front panel portion being vertically folded up from said square board with said rectangular opening disposed in alignment with said two frame members;

two unitary side board portions bilaterally extending from said square board at two opposite sides, each of which comprising two unitary trapezoidal reinforcing strips at two opposite ends with an unitary side strip defined therebetween, said side board portions being vertically inwardly folded up from said square board with said reinforcing strips disposed at different angles to reinforce the structure;

a slot card mounting board portion extending from said square board at one side opposite to said front panel portion, having an unitary side strip for connection, and being vertically inwardly folded up from said square board

for mounting slot card; and

a back panel portion extending from one of said reinforcing strips, having an opening thereon and being vertically inwardly folded up from said square board for mounting electric power supply device.

2. A housing for mounting electronic components, the housing being integrally formed from a single metal sheet and comprising a generally rectangular base having upstanding therefrom along each edge thereof a side wall member, adjacent side wall members being connected together at each corner of the base, the base also having at least one component-supporting member upstanding therefrom located inwardly of said edges.

3. A housing according to Claim 2, wherein the base has a pair of said component-supporting members upstanding therefrom, said members being positioned so as to be capable of supporting a component such as a disk drive therebetween.

4. A housing for mounting electronic components, substantially as described with reference to the drawings.